

**The Changing Role of Intellectual Property in Asia:
Moving Beyond "Producers" and "Consumers"
Friday, March 7**

***Intellectual Property Rights and
Economic Development: Correlation
or Causation?***

Jayashree Watal
WTO

Overview

- ❑ Different purposes of IPRs
- ❑ Difficulties in economic studies
- ❑ Role of IPRs in economic development
 - Correlation vs. causation
 - Some factors to consider
- ❑ Evidence on appropriating returns from R&D
- ❑ Evidence on IPRs, FDI and technology transfer
- ❑ Patents and pharmaceutical prices

Does not purport to be a complete analysis – just some random thoughts attributable to the WTO Secretariat or Members

Different purposes of IPRs

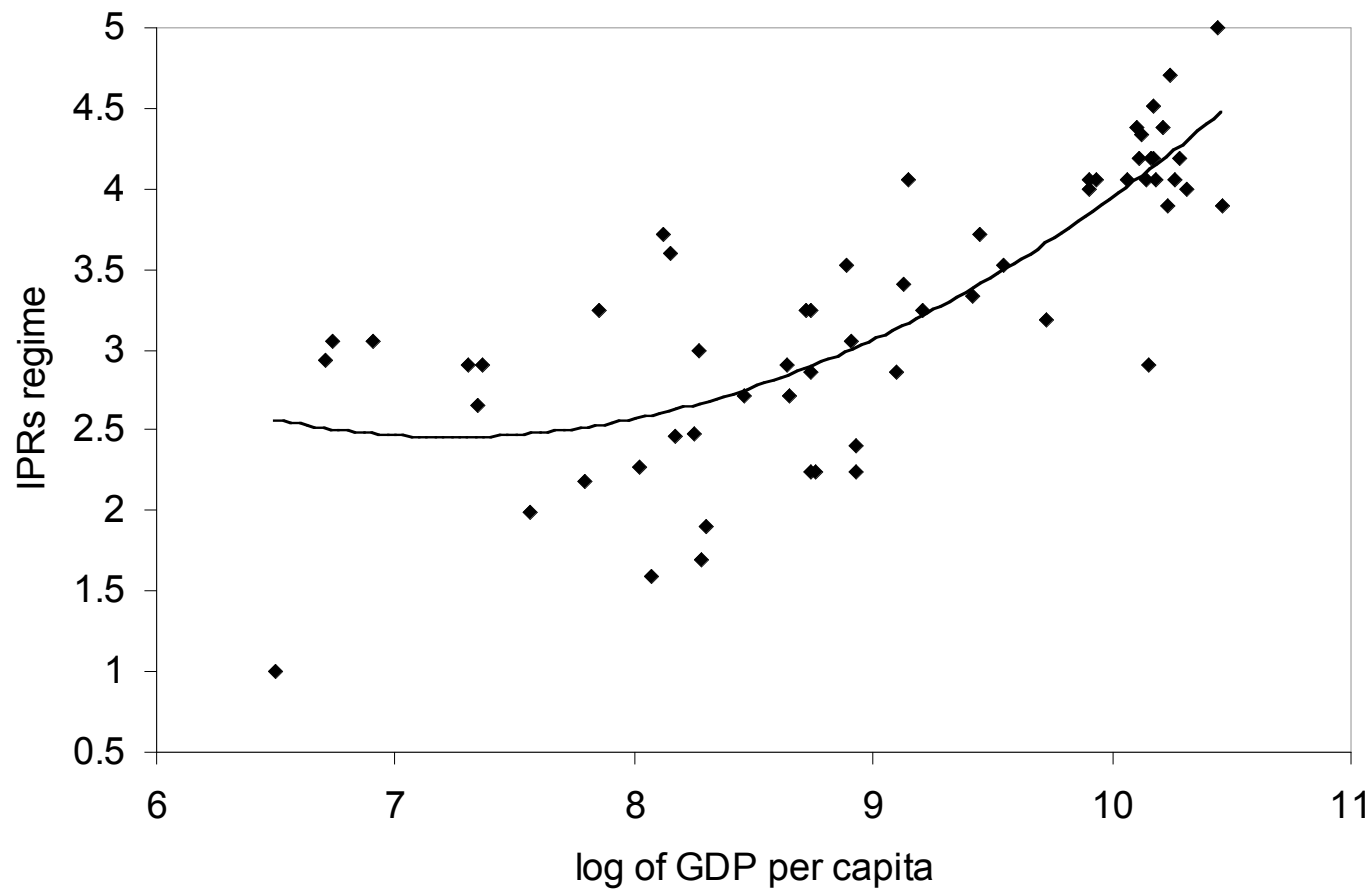
- IPRs that aim to stimulate inventive and creative activities
 - Patents, copyright, industrial designs, plant breeders' rights, layout designs for integrated circuits, utility models, trade secrets
 - Prevents direct copying – encourages inventing around..
 - Depends on ability to appropriate returns to investment; market power
 - IPRs that aim to resolve information problems
 - Trademarks, geographical indications
 - Value depends on marketing strategies
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Difficulties with economic studies of IPRs

- Long-term nature of incentive effects
 - Establishing the correct counterfactual
 - Across countries: many other institutional differences
 - Over time: IPRs reforms usually do not offer a clean natural experiment
 - Correlation versus causation (next slide)
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Correlation, but not causation

Strength of IPRs regime and GDP per capita for 60 countries, 2000



The role of IPRs in economic development - Some factors

- Depends on stages of development: Michael Porter's factor-driven; efficiency-driven; innovation-driven.
 - "Typically, a less developed country benefits from a weak patent system because its firms can more readily copy the successes of advanced rivals. The United States aided its infant synthetic organic chemicals industry by temporarily weakening a segment of the national patent system." Kathryn Steen, *Ibis*, March 2001; East Asia.
 - But examples of hi-tech exports from low income developing countries.

 - IPRs could directly improve efficiencies in licensing transactions, leading to knowledge transfers, including know-how and tacit knowledge
 - Different considerations for easily copiable and more difficult technologies
 - Could be useful to see both perspectives of licensor and licensee, for eg. licensee needs exclusivity too
 - Increased dependence on imports and higher costs for technologies?

 - Indirect impact on entry of specialist suppliers, esp. upstream.
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Machlup's conclusion in 1958

“If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.”

Evidence on appropriating returns from R&D

- Studies confirm that patents are only partially relevant in appropriating R&D returns – importance of discrete (ex. chemicals and pharmaceuticals) vs. complex technologies (ex. ICT)
 - Patent renewal models - Schankerman et al. for several European countries
–problem: measure only private value of patents, not social returns or growth effects
 - Surveys in US; Europe: Levin et al (1987), Cohen et al (2000)
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Evidence on IPRs, FDI and technology transfer

- Results are mixed, depending on approach and estimation sample. Examples:
 - Javorcik (2004): Weak IPRs, negative effect on inward FDI, esp. for local production
 - OECD (2007): Strong patent rights +vely associated with inward FDI, high-tech inflows and domestic innovation.
 - Nagesh Kumar (2001): Weaker IP decreases dependence on imports and increases tech capability, exs. East Asia, India
 - Conclusion: a sharp strengthening of the IPRs regime alone is unlikely to substantially boost overall FDI inflows.
 - The Ginarte-Park IPR-strength index used by most economists not always accurate. Has been updated to 2005 recently.
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Patent and pharmaceutical prices

- Simulation models: hypothetical price and welfare effects from 'overnight' patent protection of existing drugs:
 - Model pharmaceutical supply/demand
 - Introduce market exclusivity for pharmaceutical compounds under patent protection abroad
 - Studies by Watal (2000), Fink (2001), Chaudhuri, Goldberg, and Jia (2006) on India – all show significant welfare losses to consumers but last shows that this is far higher than losses to domestic industry or gains to patent owners
 - Always true in the short run – but at what point does a country anticipate benefits (net welfare gains) from stronger IPRs? (Korea 4th, China 7th largest filer of patent applications in PCT system)
 - Need to estimate the elasticity of local R&D and productivity to strengthening IPR protection?
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Conclusion

- Need more and better economic research that can inform policy makers on role of IPRs in economic development
 - We need:
 - More economists willing to enter the field and search for solutions to the data/methodological challenges
 - More IP lawyers willing to explain to economists the functioning of the IPRs system and its many nuances
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